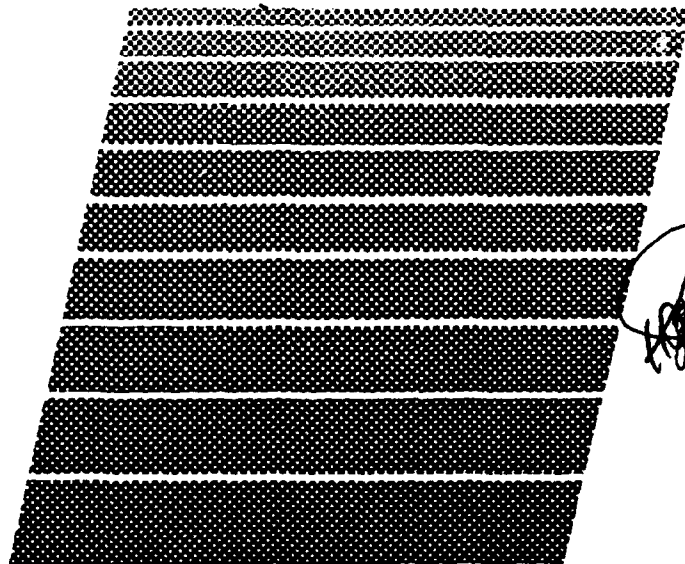


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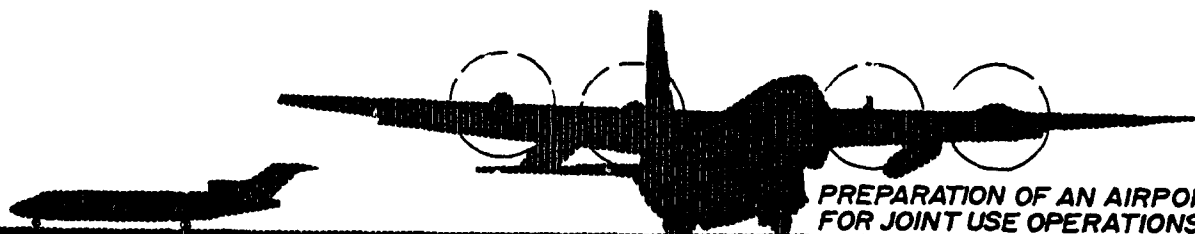
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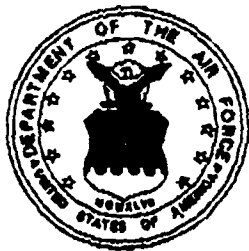
**EXECUTIVE SUMMARY**

# **PHASE I REPORT**

April 1987 ( Rev. Aug. 1987 )



PREPARATION OF AN AIRPORT MASTER PLAN  
FOR JOINT USE OPERATIONS AT SCOTT AFB, IL



**Air Force  
Environmental Planning Division  
(HQ USAF/CEVP)**

Room 5B269  
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Washington, DC 20330-1260

16 JUL 93

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STATE OF ILLINOIS,  
DEPARTMENT OF TRANSPORTATION,  
DIVISION OF AERONAUTICS and  
COUNTY OF ST. CLAIR, ILLINOIS

# Final Executive Summary Phase I Report

PREPARATION FOR AN  
AIRPORT MASTER PLAN

for  
JOINT USE OPERATION  
at  
SCOTT AFB, ILLINOIS

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April 1987 (Revised August 1987)

Prepared by:

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THE PARRY COMPANY

## Executive Summary

The first phase report on the Master Plan and Environmental Impact Analysis for the joint military and civil use of Scott Air Force Base (Scott AFB) has been prepared to answer the following questions:

- (1) Is there a future market for commercial air service in Southwestern Illinois to supplement the existing commercial service now being provided to the St. Louis Metropolitan area?
- (2) If so, what are the possible alternatives to provide this supplemental service; a new airport, expansion of an existing public use airport, or is the joint use of Scott AFB, the best alternative?
- (3) What is the impact on the future growth and development of this region if no action is taken?

The future need for air service in the five counties (Clinton, Madison, Monroe, St. Clair, and Washington Counties) comprising the Illinois portion of the St. Louis Consolidated Metropolitan Statistical Area (St. Louis CMSA) was analyzed. Alternative solutions to meet this demand were ranked on economic, social, and environmental merit and recommendations were formulated.

Several basic requirements were considered to be mandatory.  
They were:

- (1) The National Defense mission of Scott AFB was not to be compromised.
- (2) The selected alternative must be compatible with the existing and proposed procedures for the allocation of air space and control of air traffic.
- (3) The proposed alternative must consider adverse environmental results of its implementation and mitigation measures recommended.

Recent events, primarily the deregulation of the airlines and the continuing growth of commercial air activity in both the transportation of people and goods, have resulted in greater public awareness of the congestion, delays, and costs due to the lack of capacity of the nation's major airport complexes.

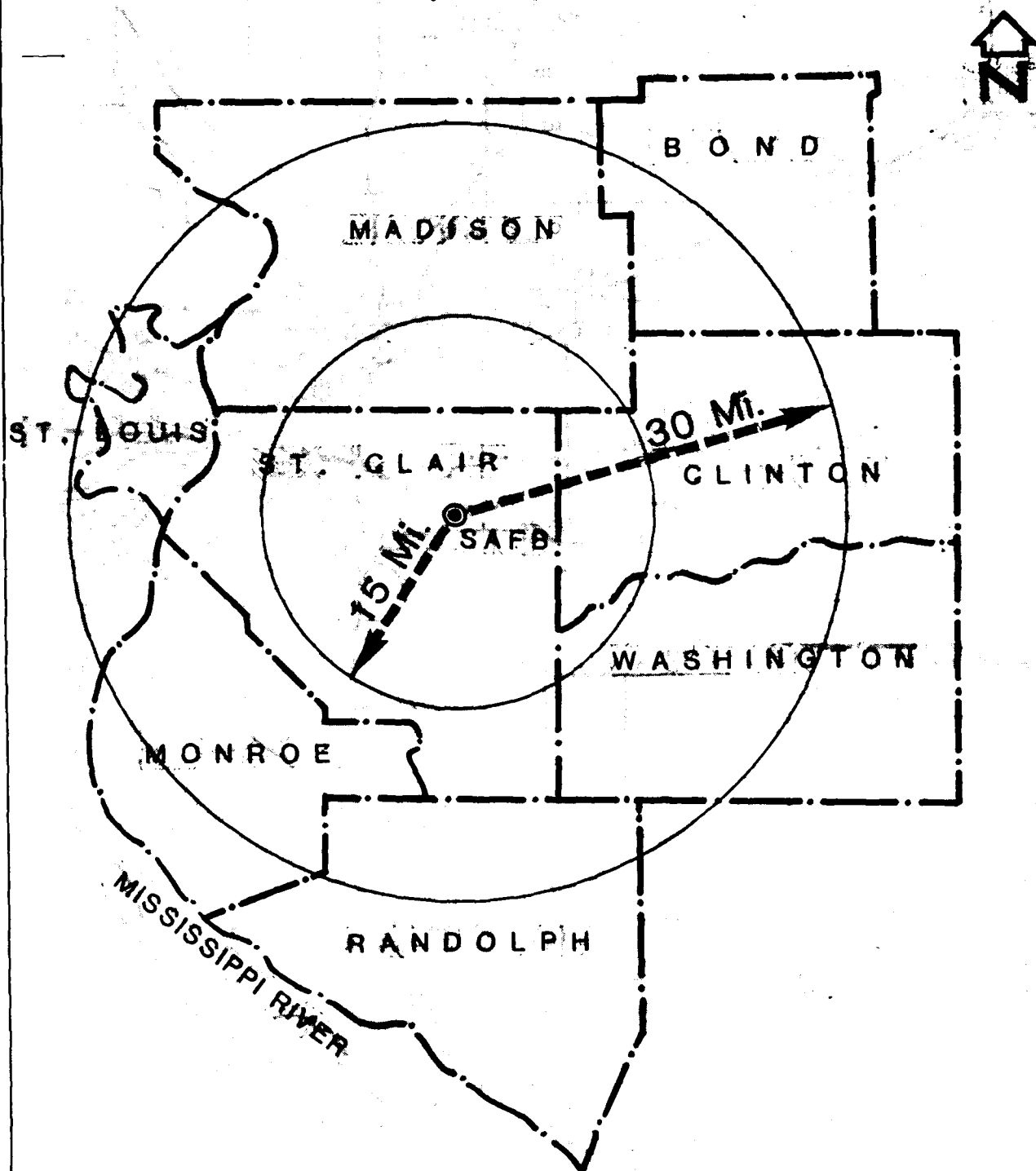
The St. Louis metropolitan area has been identified by the FAA as one which will experience almost complete commercial air service saturation within the next few years. While Lambert-St. Louis continues to add to its capacity, and has a positive program for further capacity increases only incremental improvements have been made in meeting the ever increasing demand for air services.

In 1985, the Illinois Dept. of Transportation commissioned a study to determine if it was feasible to share the existing air resources at Scott AFB between military and civil users to increase the over-all capacity of the greater St. Louis metropolitan area and better serve the Southwestern section of the state.

The timeliness of such a study results from a 1984 joint agreement between the Secretary of Defense and the Secretary of Transportation supporting such joint use concepts as well as the identification of Lambert-St. Louis as one of the congested airports in the nation.

One of the fastest growing elements of the air system has been that of air freight, particularly the small package carrier. The initial thrust of the feasibility study was directed towards providing supplemental service for this special air activity. It later became evident that the Southern Illinois area (see Exhibit 1) could possibly support its own passenger service and further potential exists in the long haul air cargo market. (Two counties within 30 miles of Scott AFB but not in the St. Louis CMSA were included in the review, Bond and Randolph.)

As the new stated Federal policy is to encourage the joint civil/military use of existing airport resources, the FAA, the State of Illinois and St. Clair county jointly sponsored a more



ESTABLISHMENT OF  
TOTAL STUDY AREA

detailed analysis of the conclusions of the feasibility study.

This phase one report places additional emphasis on the potential for passenger service. The interest in package express and air cargo still prevails but the continuing growth of passenger traffic straining the capacity of all major metropolitan areas makes this segment of growth more important in the selection of the choice of alternatives.

The first step to establish facilities requirements is to determine (1) the extent of the demand for air service, (2) the capacity of the existing commercial air facilities and (3) the size of the gap between supply and demand.

Once this has been determined and the nature of the demand identified, an assessment of alternative solutions is made, including the no action alternative, and a conclusion reached on the action to be undertaken.

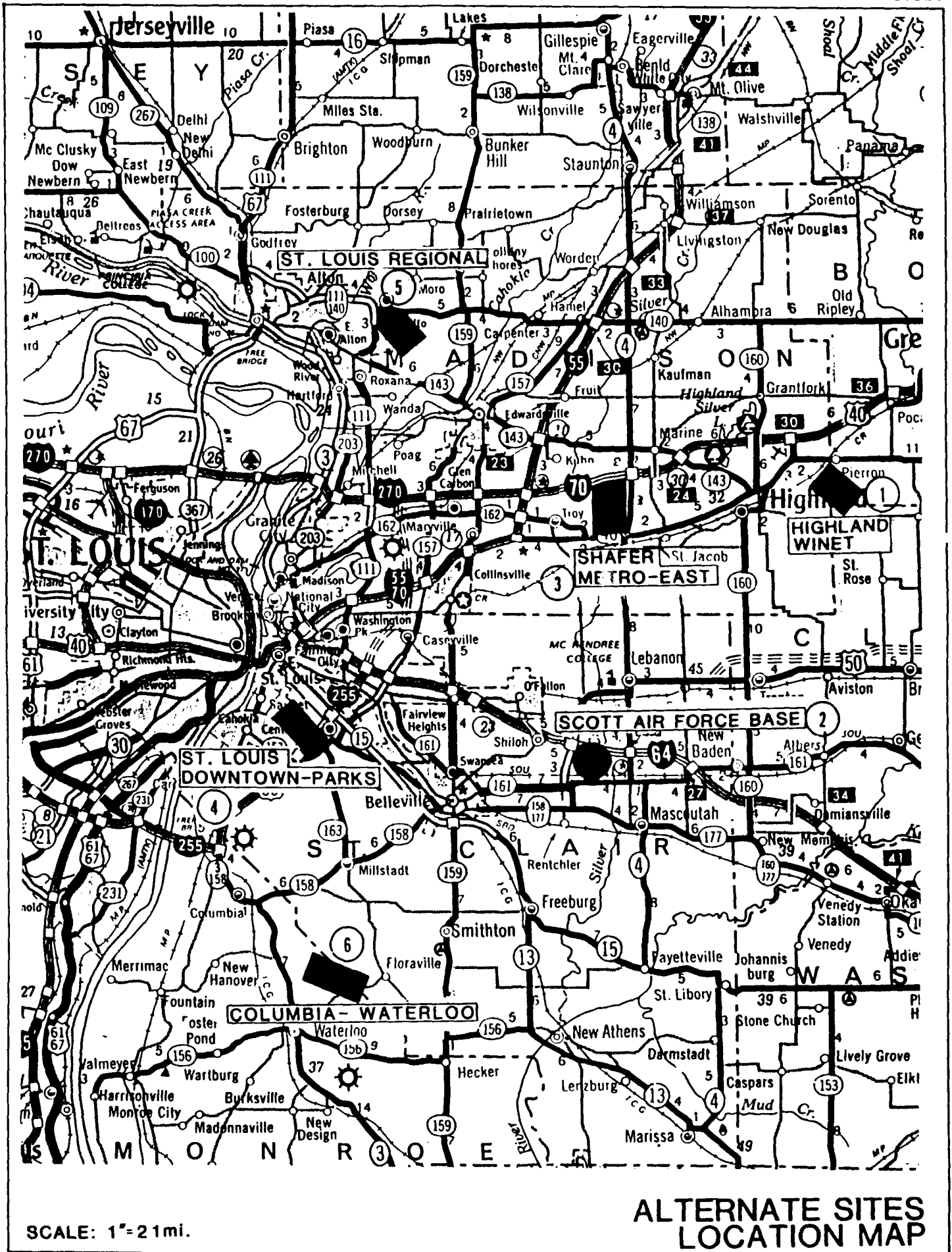
By the year 1990, the total population of this seven Illinois county area (Bond, Clinton, Madison, Monroe, Randolph, St. Clair, and Washington Counties) will exceed 600,000 with an additional population in the City of St. Louis of over 400,000. This population of 600,000 is greater than that of cities such as Kansas City, Missouri; Louisville, Kentucky; Seattle, Washington; and Nashville, Tennessee.



If this area was geographically separated from the St. Louis CMSA, the seven Illinois county area could independently support air service. Presently, however, the proximity of Lambert-St. Louis has overshadowed the relatively smaller requirements of this portion of the region. Lambert-St. Louis will continue to provide the majority of commercial service requirements.

For purposes of determining the amount of gap which may occur in the future between forecast demand and capacity, based on FAA criteria an operational estimate of 470,000 operations per year was considered to be the level when saturation will occur at Lambert-St. Louis. This is expected to happen within the near future.

Efforts continue by all concerned to increase capacity at Lambert-St. Louis. An informal analysis of present potential improvements is that such corrective measures may provide an increase of approximately 10% or a total of 520,000 operations. Based on an FAA forecast of 640,000 operations per year in 2005, a capacity gap of 120,000 operations will still occur. Various plans have been considered which may influence these figures significantly but it appears that sufficient demand exists in the Illinois sector of the St. Louis CMSA to support service on its own merit. Such service will only address a portion of the total gap and will not negate the need for continuing to provide additional commercial air service facilities to the St. Louis CMSA.



While the first phase study confirmed that a demand existed for small package cargo and limited international all-cargo operations, it became increasingly evident in this study that commuter air passenger demand may be greater than originally envisioned. With large carriers becoming more familiar with the "hub-and-spoke" concepts commuters are carrying passengers longer distances in larger aircraft. Flights of 200-300 miles and aircraft of 50 passenger capacity are not uncommon. The possibility of establishing a "spoke" to one or more hubs appears possible. Chicago, Cincinnati and Memphis are candidate "hub" connectors.

Alternatives were reviewed as potential solutions to the providing of commercial service. The expansion and joint use of Scott Air Force Base, or the construction of a new airport, a down-scaled version of the original Columbia-Waterloo new airport proposal, were considered. It appeared that, if a completely new airport was to be built the location would still be in the same geographic area previously selected. The expansion of existing public-use general aviation airports was also considered.

Of the latter, two are publicly owned and two are privately owned. The publicly owned airports are St. Louis Regional (Alton Civil Memorial), and St. Louis Downtown-Parks (Bi-State Parks).

ALTERNATIVE COMPARISON MATRIX								
SCOTT AIR FORCE BASE								
JOINT USE MASTER PLAN								
RATED ITEM	AIRPORT/SITE	SCOTT AFB	NEW AIRPORT	St. LOUIS REGIONAL	St. LOUIS DOWNTOWN-PARKS	HIGHLAND-WINET	SHAHER METRO-EAST	DO NOTHING
Capacity Enhancement	S	G	P	P	G	G	P	
Airspace/Obstructions	G	G	G	P	G	G	N/A	
Development Requirements/Potential	S	S	P	P	G	G	P	
Construction Costs/Cash Flow	S	P	G	P	G	G	N/A	
Overall Environmental Impact (Adverse)	M	L	H	H	L	L	N/A	
Noise	H	L	H	H	L	L	S	
Compatible Land Use	L	L	H	H	L	L	N/A	
Historical and Archeological Sites	L	L	L	L	L	L	N/A	
Section 4(f) Lands	L	L	H	L	L	L	N/A	
Endangered Species	L	L	L	L	L	L	N/A	
Biotic Communities	M	L	M	L	L	M	N/A	
Farm Lands	M	H	M	L	L	L	N/A	
Wetlands	H	M	M	M	L	H	N/A	
Floodplains	H	L	L	M	L	L	N/A	
Access/Location	(H)	(M)	(L)	(M)	(L)	(L)	N/A	
Socio-Economic	(H)	(H)	(M)	(M)	(L)	(L)	(L)	
Sociological	M	L	H	H	L	L	N/A	
Land Acquisition	M	H	H	H	L	L	N/A	
COMPOSITE RATING	S	G	G	P	P	P	P	

For Alternative Comparisons

P - Poor. G - Good. S - Superior

For Environmental Impact Concerns

L - Low Impact M - Medium Impact

H - High Impact ( ) - Positive Impact

TAMS  
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The privately owned airports, open for public use, are Highland-Winet and Shafer-Metro East, both in Madison County. These locations including Scott AFB and the previously chosen location for a new commercial airport are shown on Exhibit 2.

The seven alternatives (including the "Do Nothing" alternative) evaluated in this phase have been rated according to the basic considerations associated with the project which are summarized as follows:

- (1) Enhance capacity to meet the forecast demand.
- (2) Minimize potential airspace and air traffic use conflicts.
- (3) Permit time phasing of the development consistent with the forecast demand and offer additional potential beyond forecast period.
- (4) Analyze initial costs and cash flow requirements.
- (5) Mitigate potential adverse environmental impacts to the extent possible.

The seven alternatives were reviewed in light of the five basic considerations outlined above. Based upon a review of the detailed evaluation of each alternative, subjective ratings were developed and are presented in Exhibit 3. The individual

environmental impacts that comprise the overall environmental impact for each alternative are also presented in Exhibit 3.

It must be emphasized that several of the basic considerations are critical, regardless of any subjective rating, insofar as the ultimate feasibility of the project is concerned. For example, if an alternative results in an airport location and runway configuration considered not feasible by the FAA due to airspace or obstruction conflicts, the alternative must be rejected. Of special significance is the capability of the alternative to pass the tests of environmental acceptability.

From an environmental standpoint each of the sites have environmental concerns. Special focus has been placed on aircraft noise, conversion of wetlands and the taking of farmland. The Alternative Comparison Matrix (Exhibit 3) compares each alternative in a qualitative manner. A quantitative analysis at this stage cannot be made with any degree of accuracy. Weighting and numerically measuring the value of socio-economic benefits against wetland conversion is based almost entirely on the qualitative judgement of the rating team.

Based upon the results presented in Exhibit 3, the Scott Air Force Base alternative received the "superior" rating. The New Airport and St. Louis Regional Airport alternatives follow with a "good" rating. The St. Louis Downtown-Parks, Highland-Winet,

Shafer-Metro East alternatives, and the "Do Nothing" alternative all received "poor" ratings.

The "new airport" solution has previously been rejected for institutional reasons.

The principal constraint of St. Louis Regional is its large adverse impact on adjacent communities.

St. Louis Downtown-Parks is restricted by adjacent infrastructure and may be limited by ATC procedures.

Highland-Winet and Shafer Metro East are too small for air carrier operations and fail to provide high positive environmental impacts. In fact, they were found to be not expansions of existing facilities but, in reality, alternate locations for a new airport.

The "Do-Nothing" alternative results in:

- Continuing deterioration of air service to users including the large demand originating at Scott AFB.
- Failure of the St. Louis metropolitan area to keep pace with the economic growth of the balance of the country.
- Fewer opportunities to reduce unemployment in the Region due to limits on economic growth.

- Less potential for diversification of employment base.
- Employment opportunities eliminated if a new commercial air center is not built.

It is recommended that using Scott AFB is the best alternative solution in providing commercial air service to and from the seven counties under the study plan.

Scott AFB meets the following criteria as well or better than any of the other alternatives:

- It is near the center of demand for air service, generating a considerable portion of the demand.
- It appears that satisfactory joint-use and security agreements can be developed.
- Civil air carrier operations are compatible with the military mission and with the addition of taxiways and a new runway may even enhance this mission.
- Based on discussions with the FAA it appears there are no airspace problems that cannot be resolved.
- It is readily accessible to the labor market for the training and employment of airport and air carrier personnel.



- The development costs are not excessive.
- The majority of adverse environmental concerns can be mitigated.
- Ground transportation access is excellent.
- Weather, air traffic control, air navigational facilities, crash, fire and rescue services and other common airfield installations can be shared, thus reducing operating and maintenance costs for both civil and military operations.

The next step in the continuing evaluation of the joint use study will be to further explore alternative developments at Scott AFB, determine what are the most appropriate actions to mitigate adverse environmental impacts, recommend the best alternative, and present this alternative for review by the Air Force, State and local officials, and the interested public.